## User's Guide

# E2240V E2340V

Make sure to read the Important Precautions before using the product. Keep the User's Guide(CD) in an accessible place for future reference.

See the label attached on the product and give the information to your dealer when you ask for service.



### Important Precautions

This unit has been engineered and manufactured to ensure your personal safety, however improper use may result in potential electrical shock or fire hazards. In order to allow the proper operation of all safeguards incorporated in this display, observe the following basic rules for its installation, use, and servicing.

### **On Safety**

Use only the power cord supplied with the unit. In case you use another power cord, make sure that it is certified by the applicable national standards if not being provided by the supplier. If the power cable is faulty in any way, please contact the manufacturer or the nearest authorized repair service provider for a replacement.

The power supply cord is used as the main disconnection device. Ensure that the socket-outlet is easily accessible after installation.

Operate the display only from a power source indicated in the specifications of this manual or listed on the display. If you are not sure what type of power supply you have in your home, consult with your dealer.

Overloaded AC outlets and extension cords are dangerous. So are frayed power cords and broken plugs. They may result in a shock or fire hazard. Call your service technician for replacement.

As long as this unit is connected to the AC wall outlet, it is not disconnected from the AC power source even if the unit is turned off.

#### Do not Open the Display:

- There are no user serviceable components inside.
- There are Dangerous High Voltages inside, even when the power is OFF.
- Contact your dealer if the display is not operating properly.

#### To Avoid Personal Injury:

- Do not place the display on a sloping shelf unless properly secured.
- Use only a stand recommended by the manufacturer.
- Do not drop an object on or apply impact to the product. Do not throw any toys or objects on the product screen.
  - It can cause injury to human, problem to product and damage the display.

#### To Prevent Fire or Hazards:

- Always turn the display OFF if you leave the room for more than a short period of time. Never leave the display ON when leaving the house.
- Keep children from dropping or pushing objects into the display's cabinet openings. Some internal parts carry hazardous voltages.
- Do not add accessories that have not been designed for this display.
- When the display is to be left unattended for an extended period of time, unplug it from the wall outlet.
- In the presence of thunder and lightning, never touch the power cord and signal cable because it can be very dangerous. It can cause electric shock.

#### On Installation

Do not allow anything to rest upon or roll over the power cord, and do not place the display where the power cord is subject to damage.

Do not use this display near water such as near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool.

Displays are provided with ventilation openings in the cabinet to allow the release of heat generated during operation. If these openings are blocked, built-up heat can cause failures which may result in a fire hazard. Therefore, NEVER:

- Block the bottom ventilation slots by placing the display on a bed, sofa, rug, etc.
- Place the display in a built-in enclosure unless proper ventilation is provided.
- Cover the openings with cloth or other material.
- Place the display near or over a radiator or heat source.

Do not rub or strike the Active Matrix LCD with anything hard as this may scratch, mar, or damage the Active Matrix LCD permanently.

Do not press the LCD screen with your finger for a long time as this may cause some afterimages.

Some dot defects may appear as Red, Green or Blue spots on the screen. However, this will have no impact or effect on the display performance.

If possible, use the recommended resolution to obtain the best image quality for your LCD display. If used under any mode except the recommended resolution, some scaled or processed images may appear on the screen. However, this is characteristic of the fixed-resolution LCD panel.

Leaving a fixed image on the screen for a long time may cause damage to the screen and cause image burn-in. Make sure to use a screen saver on the product. Burn-in and related problems are not covered by the warranty on this product.

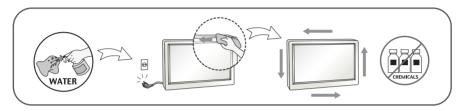
Do not shock or scratch the front and sides of the screen with metallic objects. Otherwise, it may cause damage to the screen.

Make sure the panel faces forward and hold it with both hands to move. If you drop the product, the damaged product can cause electric shock or fire. Contact an authorized the service center for repair.

Avoid high temperatures and humidity.

### **On Cleaning**

- Unplug the display before cleaning the face of the display screen.
- Use a slightly damp (not wet) cloth. Do not use an aerosol directly on the display screen because over-spraying may cause electrical shock.
- When cleaning the product, unplug the power cord and scrub gently with a soft cloth to prevent scratching. Do not clean with a wet cloth or spray water or other liquids directly onto the product. An electric shock may occur. (Do not use chemicals such as benzene, paint thinners or alcohol)
- Spray water onto a soft cloth 2 to 4 times, and use it to clean the front frame; wipe in one direction only. Too much moisture may cause staining.



### On Repacking

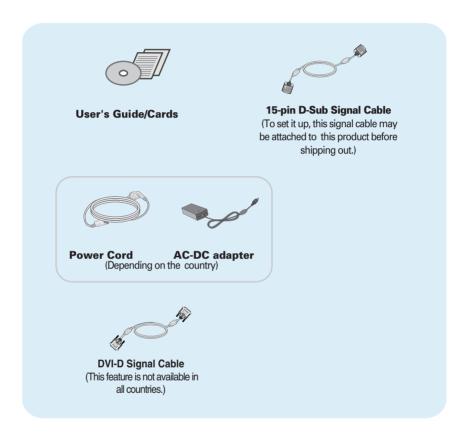
Do not throw away the carton and packing materials. They make an ideal container in which to transport the unit. When shipping the unit to another location, repack it in its original material.

### On Disposal

- Do not dispose of this product with general household waste.
- Disposal of this product must be carried out in accordance to the regulations of your local authority.

### !!! Thank for selecting LGE products !!!

Please make sure the following items are included with your monitor. If any items are missing, contact your dealer.



#### **NOTE**

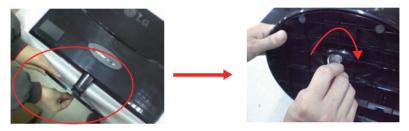
- This accessories may look different from those shown here.
- User must use shielded signal interface cables (D-sub 15 pin cable, DVI-D cable) with ferrite cores to maintain standard compliance for the product.

### Connecting the Display

- Before setting up the monitor, ensure that the power to the monitor, the computer system, and other attached devices is turned off.
- 1. Place the monitor with its front facing downward on a soft cloth.



2. Use a coin on the back of the stand base and turn the screw clockwise to tighten.



- **3.** Once assembled take the monitor up carefully and face the front side.
- **4.** When you desire to disintegrate the monitor from the stand base, use a coin to turn the screw counterclockwise.



#### **Important**

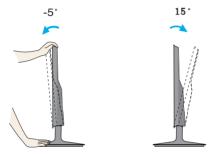
- This illustration depicts the general model of connection. Your monitor may differ from the items shown in the picture.
- Do not carry the product upside down holding only the stand base. The product may fall and get damaged or injure your foot.

### Connecting the Display

■ Before setting up the monitor, ensure that the power to the monitor, the computer system, and other attached devices is turned off.

### **Positioning your display**

- -After installation, adjust the angle as shown below.
- **1.** Adjust the position of the panel in various ways for maximum comfort.
  - Tilt Range: -5° to 15°





- Do not touch or press the screen when adjusting the angle of the monitor.
- When adjusting the angle of the screen, do not put your finger(s) in between the head of the monitor and the stand body. You can hurt your finger(s).





#### **ERGONOMIC**

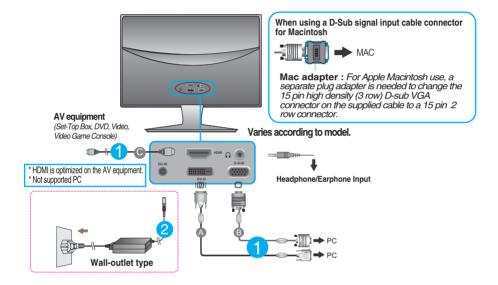
It is recommended that in order to maintain an ergonomic and comfortable viewing position, the forward tilt angle of the monitor should not exceed 5 degrees.

### **Connecting with the PC**

- **1.** Before setting up the monitor, ensure that the power to the monitor, the computer system, and other attached devices is turned off.
- Connect signal input cable 1 and power cord 2 in order, then tighten the screw of the signal cable.
  - A Connect DVI-D(Digital signal) Cable
- Connect HDMI Cable
- B Connect D-sub(Analog signal) Cable

#### **NOTE**

- This is a simplified representation of the rear view.
- This rear view represents a general model; your display may differ from the view as shown.



**3.** Press the power button on the front panel to turn the power on. When monitor power is turned on, the 'Self Image Setting Function' is executed automatically. (Only Analog Mode)

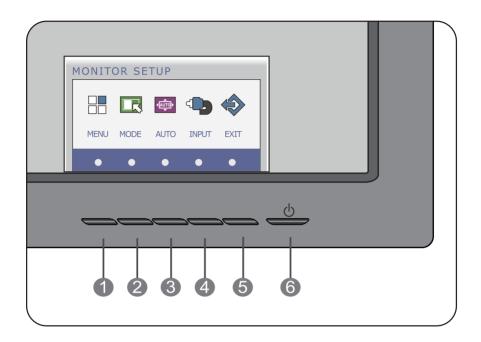


#### NOTE

' **Self Image Setting Function'?** This function provides the user with optimal display settings. When the user connects the monitor for the first time, this function automatically adjusts the display to optimal settings for individual input signals.

**'AUTO' Function?** When you encounter problems such as blurry screen, blurred letters, screen flicker or tilted screen while using the device or after changing screen resolution, press the AUTO function button to improve resolution.

#### **Front Panel Controls**





#### **MENU Button**

#### **OSD LOCKED/UNLOCKED**



This function allows you to lock the current control settings, so that they cannot be inadvertently changed. Press and hold the **MENU button** for several seconds. The message **"OSD LOCKED"** should appear.

You can unlock the OSD controls at any time by pushing the **MENU button** for several seconds. The message "OSD UNLOCKED" should appear.



Use this button to enter **F-ENGINE**, **ORIGINAL RATIO**, **PHOTO EFFECT** menus.

For more information, refer to page 16.



#### **AUTO Button**

PROCESSING AUTO

#### **AUTO IMAGE ADJUSTMENT**

When adjusting your display settings, always press the **AUTO** button before entering the On Screen Display(OSD). (Only Analog Mode)

This will automatically adjust your display image to the ideal settings for the current screen resolution size (display mode).

The best display mode is

E2240V/E2340V: 1920 x 1080



When two input signals at least are connected, you can select the input signal (D-SUB/DVI/HDMI) you want. When only one signal is connected, it is automatically detected. The default setting is D-Sub.

### **EXIT** Button

Exit the OSD (On Screen Display).

# Power Button & Power Indicator

Use this button to turn the display on or off.

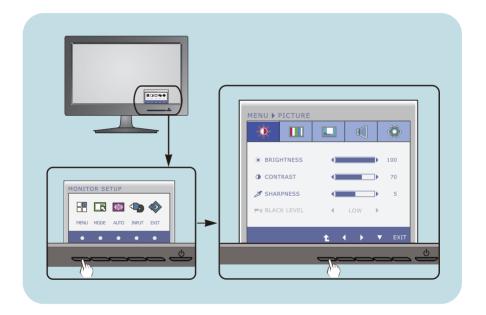
The power indicator stays white if the display is running properly (On Mode). If the display is in Sleep Mode (Energy Saving), the power indicator is blinking white.

### **Screen Adjustment**

Making adjustments to the image size, position and operating parameters of the display is quick and easy with the On Screen Display Control system.

A short example is given below to familiarize you with the use of the controls. The following section is an outline of the available adjustments and selections you can make using the OSD.

To make adjustments in the On Screen Display, follow these steps:



- 1 Press the discretionary **Button**, then the main menu of the OSD appears.
- To access a control, use the corresponding **Buttons**.
- Use the ◀/▶ Buttons to adjust the image to the desired level.
  Use the ♣ Button to select other sub-menu items.
- 4 Press the **EXIT Button** to exit from the OSD.

The following table indicates all the On Screen Display control, adjustment, and setting menus.

DSUB: D-SUB(Analog signal) input

DVI-D : DVI-D(Digital signal) input

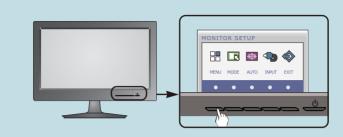
HDMI: HDMI signal

Main menu	Sub-menu S		Supported input Description	
PICTURE	BRIGHTNESS CONTRAST SHARPNESS BLACK LEVEL		DSUB DVI-D HDMI	To adjust the brightness, contrast and sharpness of the screen
COLOR	COLOR TEMP (PRESET / USER) GAMMA		DSUB DVI-D HDMI	To customize the color of the screen
DISPLAY	HORIZONTAL VERTICAL CLOCK PHASE OVERSCAN		DSUB	To adjust the position of the screen  To improve the clarity and stability of the screen
VOLUME			HDMI	To adjust the volume
OTHERS	LANGUAGE POWER INDICATOR WHITE BALANCE FACTORY RESET		DSUB DVI-D HDMI DSUB DSUB DVI-D HDMI	To customize the screen status for a user's operating environment
MODE	F-ENGINE	NORMAL MOVIE INTERNET DEMO STANDARD MOVIE GAME SPORTS WIDE	DSUB DVI-D HDMI	To select or customize desired image settings
	RATIO	ORIGINAL	DVI-D HDMI	To adjust the image size
	PHOTO EFFECT	NORMAL GAUSSIAN BLUF SEPIA MONOCHROME	DSUB DVI-D	To adjust the image size

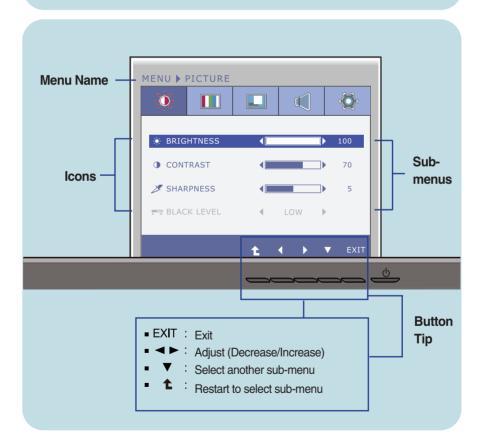
#### **NOTE**

■ The order of icons may differ depending on the model (11~20).

■■ You were introduced to the procedure of selecting and adjusting an item using the OSD system. Listed below are the icons, icon names, and icon descriptions of the all items shown on the Menu.



Press the **MENU** Button, then the main menu of the OSD appears.



#### NOTE

■ OSD (On Screen Display) menu languages on the monitor may differ from the manual.

Main menu Sub menu Description



#### **PICTURE**



**BRIGHTNESS** To adjust the brightness of the screen.

To adjust the contrast of the screen. CONTRAST

SHARPNESS To adjust the clearness of the screen.

BLACK LEVEL You can set the offset level. If you select 'HIGH', the screen will be bright and if you select 'LOW', the screen will be dark.

(only for HDMI input)

\* Offset? As the criteria for video signal, it is the darkest screen the monitor can show.

■ Exit : Exit

Decrease : Increase

: Select another sub-menu

: Restart to select sub-menu

### 

#### COLOR



#### COLOR TEMP

#### **PRESET**

Select the screen color.

 sBGB: Set the screen color to fit the sRGB standard color specification.

• 6500K: Slightly reddish white.

• 9300K: Slightly bluish white.

**USER** 

Set your own red color levels.

GREEN

RED

Set your own green color levels.

BLUE

Set your own blue color levels.

**GAMMA** 

Set your own gamma value.: 0 / 1 / 2 On the monitor, high gamma values display whitish images and low gamma values display blackish images.

■ Exit : Exit

Decrease

: Increase

: Select another sub-menu : Restart to select sub-menu

Main menu Sub menu **Description DISPLAY HORIZONTAL** To move image left and right. MENU ▶ DISPLAY To move image up and down. **VERTICAL CLOCK** To minimize any vertical bars or ① D-SUB stripes visible on the screen background. The horizontal screen size will also change. ■ Exit : Exit **◄** : Decrease : Increase **PHASE** To adjust the focus of the display. : Select another sub-menu This item allows you to remove any : Restart to select sub-menu horizontal noise and clear or sharpen the image of characters. **OVERSCAN** To select the range of output image for DTV timing in HDMI input. (only for HDMI input) Recommend overscan function to turn on when connect AV equipment. **VOLUME VOLUME** To adjust the volume of headphone/ MENU ▶ VOLUMI Earphone. (Only for HDMI input) ■ Exit : Exit : Decrease

: Increase : Mute

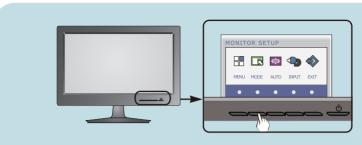
: Restart to select sub-menu

Main menu Sub menu **Description OTHERS** Ö **LANGUAGE** To choose the language in which the MENU ▶ OTHERS control names are displayed. Use this function to set the power **POWER** indicator on the front side of the monitor INDICATOR DOWER INDICATOR to ON or OFF. ∠ WHITE BALANCE If you set **OFF**, it will go off. S FACTORY RESET If you set **ON** at any time, the power indicator will automatically be turned on. ■ Fxit · Fxit WHITE If the output of the video card is : Decrease **BALANCE** different the required specifications, : Increase the color level may deteriorate due : Select another sub-menu : Restart to select sub-menu to video signal distortion. Using this function, the signal level is adjusted to fit into the standard output level of the video card in order to provide the optimal image. Activate this function when white and black colors are present in the screen. **FACTORY** Restore all factory default settings except "LANGUAGE." RESET Press the ◀ , ▶ buttons to reset immediately.

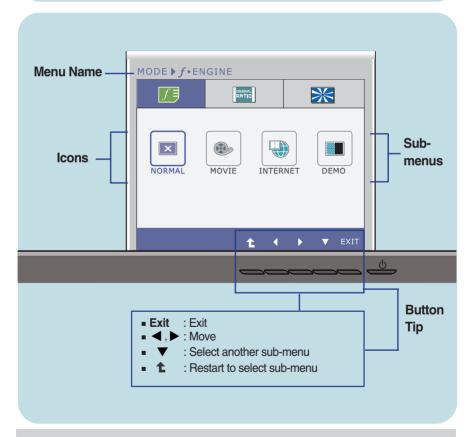
#### NOTE

If this does not improve the screen image, restore the factory default settings. If necessary, execute the WHITE BALANCE function again. This function will be enabled only when the input signal is an analog signal.

■■ You were introduced to the procedure of selecting and adjusting an item using the OSD system. Listed below are the icons, icon names, and icon descriptions of the all items shown on the Menu.



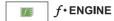
Press the MODE Button, then the main menu of the OSD appears.



#### NOTE

■ OSD (On Screen Display) menu languages on the monitor may differ from the manual.

#### Main menu Sub menu Description



D-SUB/DVI-D input



**NORMAL** 

Select this when you want to use the product in the most general using environment.

#### HDMI input



STANDARD

Select this when you want to use the original standard video.

\* In the General (Standard) mode, the  $\mathcal{F}$ :ENGINE is turned off.

#### D-SUB/DVI-D input



MOVIE

Select this when you are watching a video or movie.

#### HDMI input



Exit : Exit■ ✓ , ▶ : Move

: Select another sub-menu: Restart to select sub-menu

### Main menu Sub menu Description



D-SUB/DVI-D input



INTERNET

Select this when you are working on the document (Word etc.)

**HDMI** input



**GAME** 

Select this when you are playing a game.

#### D-SUB/DVI-D input



**DEMO** 

This is used for advertising in the store. The screen will be divided to show the standard mode on the left and video mode on the right so that the consumers can check the difference after applying the video mode.

#### HDMI input



**SPORTS** 

Select this when you watching general sports.

Exit : Exit■ ✓ , ▶ : Move

Select another sub-menuRestart to select sub-menu

Main menu Sub menu Description

### **ORIGINAL RATIO**



**WIDE** Switch to full screen mode according to input image signal.



ORIGINAL Change the input image signal ratio to original.

> \* This function works only if input resolution is lower than monitor ratio (16:9).

Exit : Exit , ▶ : Move

: Select another sub-menu : Restart to select sub-menu

Main menu

Sub menu

Description



#### **PHOTO EFFECT**



The PhotoEffect function is disabled. NORMAL



**GAUSSIAN** This menu changes the screen to be more colorful and smoother.



#### **SEPIA**

This menu changes the screen to be Sepia tone (brown color).



**MONOCH** This menu changed the screen to be Gray tone (black-and-white Picture).

: Exit Exit

: Move

: Select another sub-menu

: Restart to select sub-menu

Check the following before calling for service.

### No image appears

- Is the power cord of the display connected?
- Check and see if the power cord is connected properly to the power outlet.
- Is the power indicator light on?
- Press the Power button.
- Is the power indicator flickering?
- If the display is in power saving mode, try moving the mouse or pressing any key on the keyboard to bring up the screen.
- Try to turn on the PC.
- Do you see an "OUT OF RANGE" message on the screen?
- This message appears when the signal from the PC (video card) is out of horizontal or vertical frequency range of the display. See the 'Specifications' section of this manual and configure your display again.
- Do you see a "CHECK SIGNAL CABLE" message on the screen?
- This message appears when the signal cable between your PC and your display is not connected. Check the signal cable and try again.

### Do you see a "OSD LOCKED" message on the screen?

- Do you see "OSD LOCKED" when you push MENU button?
- You can secure the current control settings, so that they cannot be inadvertently changed.
   You can unlock the OSD controls at any time by pushing the MENU button for several seconds: the message
  - "OSD UNLOCKED" will appear.

### Display image is incorrect

- Display Position is incorrect.
- Press the AUTO button to automatically adjust your display image to the ideal setting.
   If the results are unsatisfactory, adjust the image position using the H position and V position icon in the on screen display.
- On the screen background, vertical bars or stripes are visible.
- Press the AUTO button to automatically adjust your display image to the ideal setting.
   If the results are unsatisfactory, decrease the vertical bars or stripes using the CLOCK icon in the on screen display.
- Any horizontal noise appearing in any image or characters are not clearly portrayed.
- Press the AUTO button to automatically adjust your display image to the ideal setting.
   If the results are unsatisfactory, decrease the horizontal bars using the PHASE icon in the on screen display.
- Check Control Panel --> Display --> Settings and adjust the display to the recommended resolution or adjust the display image to the ideal setting. Set the color setting higher than 24 bits (true color).

#### **IMPORTANT**

- Check Control Panel --> Display --> Settings and see if the frequency or the resolution were changed. If yes, readjust the video card to the recommend resolution.
- If the recommended resolution (optimal resolution) is not selected, letters may be blurred and the screen may be dimmed, truncated or biased. Make sure to select the recommend resolution.
- The setting method can differ by computer and O/S (Operation System), and resolution mentioned above may not be supported by the video card performance. In this case, please ask to the computer or the video card manufacturer.

### Display image is incorrect

- The screen color is mono or abnormal.
- Check if the signal cable is properly connected and use a screwdriver to fasten if necessary.
- Make sure the video card is properly inserted in the slot.
- Set the color setting higher than 24 bits (true color) at **Control Panel Settings**.
- The screen blinks.
- Check if the screen is set to interlace mode and if yes, change it to the recommend resolution.

# Do you see an "Unrecognized monitor, Plug&Play (VESA DDC) monitor found" message?

- Have you installed the display driver?
- Be sure to install the display driver from the display driver CD (or diskette) that comes with your display. Or, you can also download the driver from our web site: http://www.lge.com.
- Make sure to check if the video card supports Plug&Play function.

### The Audio function is not working

- Picture OK & No sound.
- Check whether volume is "0".
- · Check sound muted.
- HDMI cable installed properly.
- Head phone cable installed properly.
- Check sound format. Not supply to compressed sound format.

Display	54.6 cm (21.5 inch) Flat Panel Active matrix-TFT LCD Anti-Glare coating Visible diagonal size: 54.6 cm 0.248 x 0.248 mm (Pixel pitch)		
Sync Input	Horizontal Freq. Vertical Freq. Input Form	Analog HDMI	z to 83 kHz (Automatic) g,Digital : 56 Hz to 75 Hz (Automatic) : 56 Hz to 61 Hz (Automatic) ate Sync.
Video Input	Signal Input Input Form	DVÌ - [ 19 pin	D-Sub Connector D Connector (Digital) HDMI Connector g (0.7 Vp-p/ 75 ohm), Digital, HDMI
Resolution	Max Recommend		1920 x 1080 @ 60 Hz 1920 x 1080 @ 60 Hz
Plug&Play	DDC 2B (Digital, HDMI), DDC 2AB (Anlaog)		
Power Consumption	On Mode Sleep Mode Off Mode	: ≤ ≤	23 W (Typ.) 1 W 1 W
Dimensions & Weight	Height 41.03 cm (16.15 inch) Height 33.78 cm (13.29 i		Without Stand Width 52.98 cm (20.85 inch) Height 33.78 cm (13.29 inch) Depth 4.30 cm ( 1.69 inch)
	Weight (excl. packi	ng)	2.9 kg (6.39 lb)
Range	Tilt: -5° to 15°		
Power Input	12 V=== 3.0 A		
AC-DC Adapter	Type FSP036-DGAA1,manufactured by FSP Group or type LCAP07F,manufactured by Lienchange Electronics		
Environment al Conditions	Operating Conditions  Temperature 10 °C to 35 °C  Humidity 10 % to 80 % non-Condensing  Storage Conditions  Temperature -20 °C to 60 °C  Humidity 5 % to 90 % non-Condensing		
Stand Base	Attached ( ), Detached ( O )		
Power cord	Wall-outlet type		
NOTE  Information in this document is subject to change without notice.			

Display	58.4 cm (23 inch) Flat Panel Active matrix-TFT LCD Anti-Glare coating Visible diagonal size: 58.4 cm 0.265 x 0.265 mm (Pixel pitch)			
Sync Input	Horizontal Freq. Vertical Freq. Input Form	Analog,D	o 83 kHz (Automatic) Digital : 56 Hz to 75 Hz (Auto 6 Hz to 61 Hz (Automatic) Sync.	omatic)
Video Input	Signal Input Input Form	DVÌ - D C 19 pin H	Sub Connector Connector (Digital) DMI Connector J.7 Vp-p/ 75 ohm), Digital, H	DMI
Resolution	Max Recommend		20 x 1080 @ 60 Hz 20 x 1080 @ 60 Hz	
Plug&Play	DDC 2B (Digital, HDMI), DDC 2AB (Anlaog)			
Power Consumption	On Mode Sleep Mode Off Mode	≤ 1	8 W (Typ.) W W	
Dimensions & Weight	With Stand         Without Stand           Width 56.38 cm (22.19 inch)         Width 56.38 cm (22.19 inch)           Height 43.00 cm (16.92 inch)         Height 35.75 cm (14.07 inch)           Depth 20.20 cm (7.95 inch)         Depth 4.30 cm (1.69 inch)		n)	
	Weight (excl. packing) 3.2 kg (7.05 lb)			
Range	Tilt: -5° to 15°			
Power Input	12 V === 3.0 A			
AC-DC Adapter	Type FSP036-DGAA1,manufactured by FSP Group or type LCAP07F,manufactured by Lienchange Electronics			
Environment al Conditions	Operating Conditions  Temperature 10 °C to 35 °C  Humidity 10 % to 80 % non-Condensing  Storage Conditions  Temperature -20 °C to 60 °C  Humidity 5 % to 90 % non-Condensing			
Stand Base	Attached ( ), Detached ( O )			
	Wall-outlet type			
Power cord	Wall-outlet type			

#### NOTE

■ Information in this document is subject to change without notice.

# **Preset Modes (Resolution)**

### ■ D-SUB/DVI-D Timing

Disp	lay Modes (Resolution)	Horizontal Freq. (kHz)	Vertical Freq. (Hz)
1	720 x 400	31.468	70
2	640 x 480	31.469	60
3	640 x 480	37.500	75
4	800 x 600	37.879	60
5	800 x 600	46.875	75
6	1024 x 768	48.363	60
7	1024 x 768	60.123	75
8	1152 x 864	67.500	75
9	1280 x 1024	63.981	60
10	1280 x 1024	79.976	75
11	1680 x 1050	65.290	60
*12	1920 x 1080	67.500	60

<sup>\*</sup> Recommend Mode

### HDMI Timing

Display l	Modes (Resolution)	Horizontal Freq. (kHz)	Vertical Freq. (Hz)
1 2 3 4 5 6 7 8	480P 576P 720P 720P 1080i 1080i 1080P 1080P	31.50 31.25 37.50 45.00 28.12 33.75 56.25 67.50	60 50 50 60 50 60 50

### **Indicator**

MODE	LED Color
On Mode	White
Sleep Mode	White Blinking
Off Mode	Off

# Digitally yours ••••····

